California Debt and Investment Advisory Commission

Investing Bond Proceeds

Hilton San Diego Mission Valley
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The Fun's Over and The Real Work Begins

- Congratulations!
  - Months of careful planning are over
  - At last, the bonds have been issued
  - You've locked in the cost of funds

- Now what to do with all that money?
  - It's real money
  - It's your responsibility
  - The impact of your actions (or lack thereof) will be felt for a long time
  - Don't let poor investment performance marginalize the success of the bonds

Why Bother Worrying About Investments?

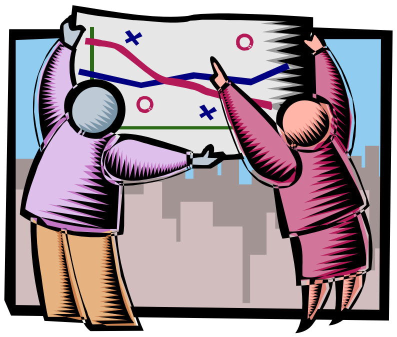
Cost

- Interest costs accrue on bonds immediately so…
  - Negative carry on investments increases financing cost
- Improved investment performance will…
  - Reduce negative carry - lower overall borrowing costs

Typical Funds

- Project Funds
  - Net funding + more earnings = smaller bond issue
  - Gross funding + more earnings = more project funds
- Reserve Funds
  - More earnings can offset costs of negative carry in Project Funds
- Debt Service Funds
  - More earnings = less net debt service (this is a good thing!)
- Escrow Funds

Formulating an Investment Strategy



- When do I start?
  - – As soon as the structure and sizing of the debt is known
  - – If you plan on using an investment advisor
    - Do it early, not late.
- Integral part of debt strategy
  - – Do you net fund or gross fund?
  - – Surety or cash-funded DSR?
  - – How confident are you in your project cash flow projections?
- Can't I wait for rates to go higher, it seems like a good bet?
  - – Yes….No….Maybe….   Did you say "bet"?

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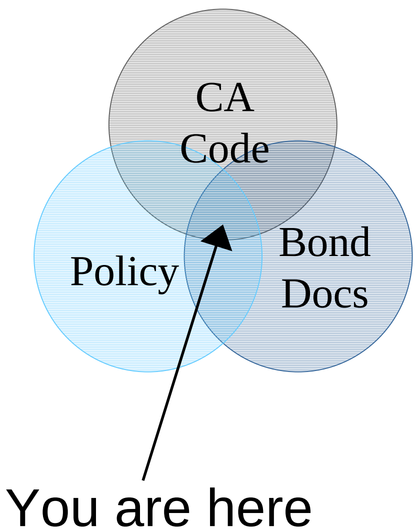
Principles of Investing

Public Funds Investing Oath of Responsibility

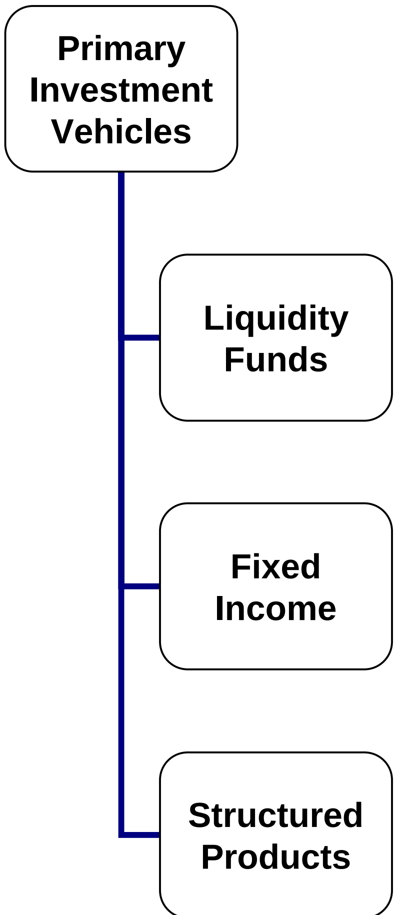
- *Safety*
  – Protect your principal by minimizing credit risk
- *Liquidity*
  – Ensure that funds are available ***when*** needed
  – Too long…market price risk
  – Too short…reinvestment rate risk
  – Matched to expectations…just right
- *Yield*
  – Generate consistent risk-adjusted returns
  – Floating or fixed rates

Sorting Out the Pieces



- "Permitted Investments" under applicable…
  - Sections of Government Code
  - Investment Policy
  - Bond Documents
  - Tax Restrictions
- External Investment Approvals
  - Insurer or other credit enhancer criteria
  - Rating agencies
- Outline why and when money will be spent
- Federal tax law compliance
  - Yield Restriction and Yield Restriction Exceptions
  - Rebate and Rebate Exceptions
  - Blending of Investment Yields
  - Bond yield "bogey"
  - Elections
  - Fair Market Pricing

Formulating an Investment Strategy



- Identify candidate investment vehicles
  - Liquidity Funds
    - Pooled Investments
    - LGIPs, money market funds, county pools, internal
  - Fixed Income
    - Treasuries, Agencies, Medium-term notes
  - Structured Products
    - Guaranteed Investment Contracts, Forward Delivery Agreements
  - Surety in lieu of cash funded reserve
  - Escrow Funds
    - SLGs, Open Markets, 0% Rolls, Float Funds

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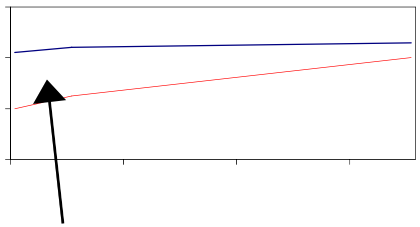
Formulating an Investment Strategy

Flattening of Yield Curve



increased likelihood of positive arbitrage in project funds

- Goal: Positive arbitrage without compromising safety or liquidity
- Prepare prospective arbitrage rebate models for investment alternatives
- Estimate bond yield (fixed versus variable)
- Estimate investment returns
- Other considerations
  - Refunding/Refunded Deals
  - Transferred Proceeds rules
  - Combined New Money/Refundings & Elections
- Consider expenditure exceptions if positive arbitrage achievable in Project Funds
- If positive arbitrage is attainable, consider enhancing safety and liquidity

Liquidity Funds

Typical Instruments
Money Markets
Sweep Funds
Investment Pools
LGIP

- Liquidity Funds
  - Funds that provide on demand withdrawals and deposits of proceeds, typically at a constant $1 NAV (or $1/share)
  - "Sweep" funds are money markets that automatically invest (or sweep) any dollars that would otherwise go uninvested
  - Money market funds are SEC regulated and have specific maturity limits on assets held
  - Local or internal "pooled investments" may have different guidelines; may offer higher/lower returns in certain markets

Liquidity Funds	
Safety	Very High / routine rating confirmations
Liquidity	Very High / Anytime / $1 in, $1 out
Yield	Variable rate / Can change daily
Fees	Management estimated 10bp to 20bp / sweep function extra
Administrative	Very little to nonexistent

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Portfolio Management

Typical Instruments
Treasuries
Agencies
Commercial Paper
CDs
portfolios thereof

- Portfolio management is a true discipline
- Markets are very transparent, but also very fast
- If internal, issuer retains and must manage market price and reinvestment risks
- Safety considerations
  - Credit risk - ratings and diversification
  - Market price (interest rate risk)
- Liquidity considerations
  - Fund characteristics
  - Expenditure dates determine liquidity/duration characteristics
  - Matching cash flows reduces risks
- Yield considerations
  - Yields measured from purchase to actual disposition date
  - Careful not to reach - consider liquidity
  - Combining differing maturities reduces risk

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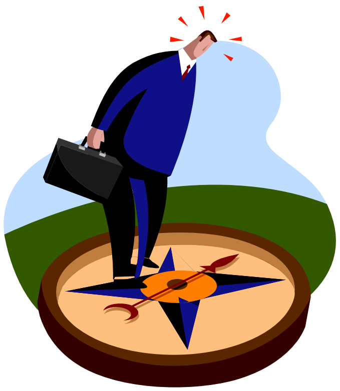
Portfolio Management



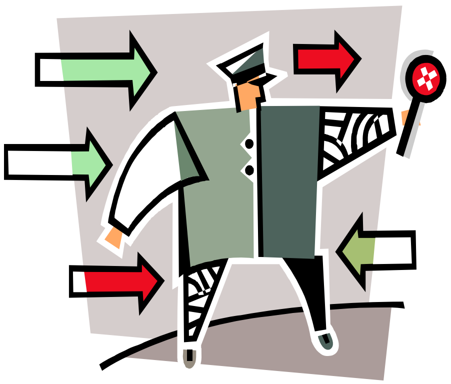
Portfolio Management	
Safety	Per issuer policies and guidelines but typically only highest rated instruments are permitted
Liquidity	Very; typically only the most liquid securities permitted. Consider duration of underlying fund
Yield	Fixed purchase yield; average life and duration driven
Fees	Transparent pricing on individual securities *Externally Managed:* Very competitive with money funds, 10-15bp, plus personalized attention and control over fund characteristics unlike money market funds *Internally Managed:* Cost of prerequisite expertise goes from ‘working’ knowledge to ‘trading’ knowledge
Administrative	Ranging from minimal to significant depending on whether externally or internally managed. However, external solution does not relieve issuer from responsibility.

Structured Products

Typical Instruments
Guaranteed Investment Contracts
Forward Delivery Agreements
Repurchase Agreements

- Structured Products are custom-tailored to the expected drawdown requirements of a fund.
  - Issuer agrees to make W/D's only for specified purposes (e.g. project costs, debt service)
  - In exchange, providers are willing to make all draws at par value (e.g. assume market price and reinvestment risk)
- Structured Products
  - Guaranteed Investment Contracts (insurers mainly, some foreign banks)
    - Involves a deposit with a 'provider', which can be collateralized at execution or under certain events (e.g., downgrade)
    - Tough initial counterparty credit rating
  - Forward Delivery Agreements (broker/dealers)
    - Not itself an investment, but rather a contract pursuant to which investments will be purchased now and in the future
    - Those investments must be permitted investments
  - Repurchase Agreements (banks and broker/dealers)
    - By definition, collateralized. Issuer's trustee holds the collateral

Structured Products



- Project / Acquisition Fund
  - Usually “full flex” to accommodate actual versus projected draw schedule
  - All draws made at par but providers will restrict draws for alternative reinvestment
- Reserve Funds
  - By agreeing to draw only for purposes under the Indenture (e.g., need to pay D/S!), the provider agrees to par value W/D’s.
  - Removes market price risk associated with a fixed income investment (e.g., Treasury note)
  - Cannot make a W/D to reinvest in another investment
- Debt Service Funds (e.g., 1/6 and 1/12 deposits)

By agreeing to certain rules for W/D’s, issuer can transfer risks typically associated with fixed income investments to the provider.

These rules are consistent with permitted W/Ds outlined in indenture

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Structured Products

Special Federal Tax Law Considerations

- purchase at Fair Market Value (issuer's sentiments exactly!)
- competitive bid process, best bid wins
- bids awarded on rate alone, so bids must be uniform (can be easier said than done)
- rules permit a 'rebate tax deduction' for certain costs (Qualified Administrative Costs).
- however, benefit only if positive arbitrage on deal (realized in the form of a lower rebate payment).

Safety	Per documents and insurer provisions, if applicable. Watch out for subtle variations
Liquidity	Very high, but only for purposes under Indenture (project, D/S, etc.). No W/D's to reinvest elsewhere.
Yield	Fixed or variable yield based on average life, duration, and size ***and*** credit of issuer.
Fees	For QAC treatment eligibility purposes, commonly expressed in terms of .20% of amounts to be invested, with upper and lower limits consistent with current regulations. For the investment advisor, typical fees range from $5,000 to $32,000. Other fees may be incurred (e.g. counsel, trustee). Providers costs are reflected in the rate bid (just like a contractor bid).
Administrative	Potential significant upfront depending on issuer experience and complexity of transaction. Post execution, minimal.

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Structured Products

Typical Instruments
Guaranteed Investment Contracts
Forward Delivery Agreements
Repurchase Agreements

- Federal Investigations
  - Feds have subpoenaed several firms – banks, insurers, advisors
  - Investigating possible bid rigging, securities and tax law violations
  - Likely to lead to increased regulatory oversight and guidance
  - Does it increase your chance of being audited?
  - LESSON
    - Know your advisor
    - Engage legal counsel with requisite experience and skill
    - Educate yourself and document

Case Study

- Bond issue
  - – $100,000,000 Wastewater Revenue Bonds
  - – Fixed Rate – Bond Yield = 4.50%
  - – 3 YR draw schedule; 2 YR average life
  - – Project Fund: $79,750,000
  - – Capitalized Interest Fund: $9,000,000
  - – Debt Service Reserve Fund: $10,000,000
  - – Costs of Issuance Fund: $500,000
  - – Flexible Permitted Investment language

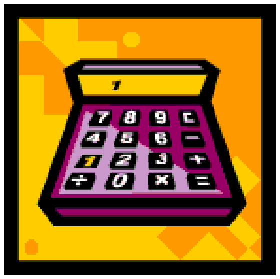
Case Study

- Project Fund – 2 YR average life
  - Options (current market conditions)
    - Liquidity Fund
    - Portfolio of Fixed Income Securities
    - Structured Product
  - Objective: Safety, Liquidity to meet project draws, Yield equal to or better than Bond Yield (4.5%).
    - 1% of negative arbitrage/carry costs issuer approximately $800,000
  - Liquidity Fund – easy, meets objective but interest rate risk
  - Portfolio – relatively easy, meets objective but reinvestment/interest rate risk if draw schedule is delayed, ongoing management required
  - Structured Product – more work upfront, meets objective if properly structured, shifts reinvestment risk to counterparty.
  - Mix + Match options

Case Study

- Debt Service Reserve Fund – 30 YR average life
  - – Options (current market conditions)
    - Liquidity Fund
    - Portfolio of Fixed Income Securities
    - Structured Product
  - – Objective: Safety, Liquidity to meet DSR draw, Yield equal to or better than Bond Yield (4.5%).
    - 1% of negative arbitrage/carry costs issuer approximately $1.6mm
    - Can be used to offset negative arbitrage in other funds
  - – Liquidity Fund – easy, meets objective but significant interest rate risk over 30 years
  - – Portfolio – relatively easy, meets objective, some reinvestment/interest rate risk but probably manageable, ongoing management required, MTM/Liquidation risk
  - – Structured Product – more work upfront, meets objective if properly structured, shifts reinvestment risk to counterparty' par put
  - – Duration issues – different markets; different strategy

Case Study

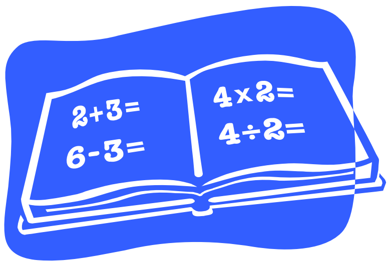


- Capitalized Interest Fund – 1 YR average life/Net Funded
  - Options (current market conditions)
    - Liquidity Fund
    - Portfolio of Fixed Income Securities
    - Structured Product
  - Objective: Safety, Liquidity to meet bond interest payments, Yield not less than net funding rate assumption (Bond Yield (4.5%))
    - 1% of negative arbitrage/carry costs issuer approximately $90,000
  - Liquidity Fund – easy, meets objective but interest rate risk
  - Portfolio – relatively easy, meets objective, no reinvestment/interest rate risk, no active management required
  - Structured Product – more work upfront, meets objective if properly structured, no reinvestment/interest rate risk, no active management required

Case Study

- Costs of Issuance Fund – 15 day average life
  - Options (current market conditions)
    - Liquidity Fund
  - No deep thought required

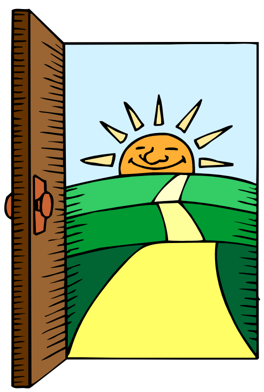
Case Study



- Recommended course of action (current market conditions)
  - Project Fund
    - Structured Product – Guaranteed Investment Contract
  - Debt Service Reserve Fund
    - 3 year Agency security
      - Flat yield curve; limited benefit from going longer; bond yield historically attainable
  - Capitalized Interest Fund
    - Laddered portfolio to match bond interest payment amount/dates
  - Costs of Issuance Fund
    - Trustee sweep

Conclusion

- DON'T DROP THE BALL!!!
  - As with investing any public funds, your objectives are: Safety / Liquidity / Yield
  - The difference is that you usually have less flexibility and unique cash flow considerations
  - It's GOOD to owe Arbitrage Rebate!



  - Consider your legacy (make it a good one!)
    - Document, Document, Document…….
    - Take the time to do the job right
    - Fulfill your responsibilities

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